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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Allen Le Roy

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06/22/2005

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EXAMINER

LEE, MICHAEL

ART UNIT

PAPER NUMBER

2614

DATE MAILED: 06/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/757,019	Applicant(s) ROY, ALLEN LE	
	Examiner M. Lee	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213:

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 26-32 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-19 is/are allowed.
- 6) ☒ Claim(s) 1-3, 22 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 20, 21 and 23-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 26-32 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

The original claimed invention and the newly claimed invention are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, the newly claimed invention has separate utility such as a remote control apparatus. See MPEP § 806.05(d).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 26-32 have been withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Objections

2. Claim 1 is objected to because of the following informalities: In claim 1, last paragraph, the term "tunable" should be changed to "controlled". Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 3 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Han (5,809,088) in view of Sugiura (4,608,710).

Regarding claim 1, Han discloses a digital television receiver shows a double conversion tuner 2 and SAW filter 4, which meet the first electrically controlled front end circuitry as claimed, and a IF amplifier 6 which meets the first amplifier as claimed. The double conversion tuner 2 is controlled by a channel selection signal which meets the remote control information as claimed. Han does not specify that the tuner is designed for driving a transmission line several meters long with intermediate frequency signals. In Han, the RF signal is inputted from an antenna to the tuner 2. In many cases, the antenna are located afar. This would cause degradation to the RF signal strength because of the inherent transmission line loss. This fact is well set forth by Sugiura: "As well known in the art, however, the higher the frequency of the signal passing the transmission line, the more energy the signal loses through the line. Therefore, when the different channel signals have reached indoors, they may be different from one another in their energy levels with the result that the channels of higher frequencies have their energy levels lowered to smaller degrees as well as that all incoming signals of different channels generally have their energies reduced in appreciable degrees, because of their extremely high frequencies. Accordingly, many conventional apparatus for such a reception require the use of an equalizer to make uniform the levels of the Different channel signals as well as the use of a wideband amplifier to increase the lowered levels of all channel signals... It is an object of the invention to provide an

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apparatus for making an indoor selection of a desired signal from among different channel signals picked up by an outdoor receiving antenna and receiving the signal by an indoor television receiver. Another object of the invention is to provide a receiving apparatus of the character described above which enables a desired one of different channel signals picked up by an outdoor antenna to be selected in an outdoor converter device by making an actual manual operation of selection inside a house or building and enables only the selected signal to be introduced indoors through a transmission line. When such an object is achieved, there is no longer any need to provide the equalizer or wideband amplifier as required by the prior art, thereby enabling a signal transmission line to be of a simpler circuit construction." Hence, if the antenna and the television receiver are separated from each other in a great distance, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to position the tuner 2, SAW filter 4 and IF amplifier to the antenna end so that the RF signal loss could be prevented.

Regarding claim 2, Han shows an analog-to-digital conversion circuitry 46 and demodulation circuitry 44.

Regarding claim 3, the mixer 44 in Han meets the frequency conversion apparatus as claimed.

Regarding claim 22, Han does not specify the matched impedance and bandpass filter network as claimed. As stated earlier, Sugiura teaches that many conventional apparatus for "such a reception" require the use of an equalizer to make uniform the levels of the different channel signals as well as the use of a wideband

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amplifier to increase the lowered levels of all channel signals. Hence, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to include an equalizer or a bandpass coupler network into Han so that a uniform signal level could be achieved throughout all channels. In addition, in order to minimize the transmission loss of Han after the modification above, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to adjust the amplifier output impedance at the antenna end to match to that of the transmission line. It is understood that an impedance matched transmission network provides maximum transmission efficiency.

Allowable Subject Matter

5. Claims 6-19 are allowed.
6. Claims 4, 5, 20, 21, 23, 24 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Lee whose telephone number 571-272-7349. The examiner can normally be reached on Monday through Thursday from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller, can be reached on 571-272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).



M. Lee
Primary Examiner
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